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ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/AV/W.No.91/2018-19

Date: 29.07.2019

Aggregate Impact Value
IS: 2386 Part IV

Client	**Assistant Executive Engineer,** Yeshwanthpura Sub Division, BBMP, Bangalore.
Agency	**Sri. T. Chandra Sekar Reddy,** Contractor, Bangalore.
Name of the Work	Pothole Filling Surroundings area of Ward No.16, BBMP, Bangalore.
Type of Mix	Wet Mix macadam
Date of Testing	29.07.2019

Sl No.	Details	Trial No. 1	Trial No. 2	Trial No. 3	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	370	372	374	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	82	84	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	288	288	288	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	22.16	22.58	22.99	22.58

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

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Job No.: CQCE/BBMP/CSR/W.No.16/2019-20

Date : 29.07.2019

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Assistant Executive Engineer,** Yeshwanthpura Sub Division, BBMP, Bangalore.
Agency : **Sri. T. Chandra Sekar Reddy,** Contractor, Bangalore.
Name of Work : Pothole Filling Surroundings area of Ward No.16, BBMP, Bangalore.
Date of Testing : 29.07.2019
Material Type : Wet Mix Macadam

Oven Dry.Wt 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	165	165	1.7	98.4	95-100
22.4	2612	2777	27.8	72.2	60-80
11.2	2416	5193	51.9	48.1	40-60
4.75	1628	6821	68.2	31.8	25-40
2.36	1365	8186	81.9	18.1	15-30
0.600	621	8807	88.1	11.9	8-22
0.075	564	9371	93.7	6.3	0-8

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Job No.: CQCE/BBMP/CSR/W.No.16/2019-20

Date : 29.07.2019

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-11

Client : **Assistant Executive Engineer,** Yeshwanthpura Sub Division, BBMP, Bangalore.

Agency : **Sri. T. Chandra Sekar Reddy,** Contractor, Bangalore.

Name of Work : Pothole Filling Surroundings area of Ward No.16, BBMP, Bangalore.

Date of Testing : 29.07.2019

Material Type : Wet Mix Macadam

As per MORTH Table 400-13

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit	23.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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Job No.: CQCE/BBMP/CSR/W.No.16/2019-20

29.07.2019

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer,** Yeshwanthpura Sub Division, BBMP, Bangalore.
Agency	**Sri. T. Chandra Sekar Reddy,** Contractor, Bangalore.
Name of Work	Pothole Filling Surroundings area of Ward No.16, BBMP, Bangalore.
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Sample ID	WMM Layer
Date of Testing	29.07.2019

Result : Flakiness Index = **11.65%**

Elongation Index = **13.06%**

Result : Combined Flakiness & Elongation index **24.71%**

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

Note:

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Job No.: CQCE/BBMP/CSR/W.No.16/2019-20

05.08.2019

Aggregate Impact Value

IS: 2386 Part IV

Client	**Assistant Executive Engineer,** Yeshwanthpura Sub Division, BBMP, Bangalore.
Agency	**Sri. T. Chandra Sekar Reddy,** Contractor, Bangalore.
Name of the Work	Pothole Filling Surroundings area of Ward No.16, BBMP, Bangalore.
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	05.08.2019

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	383	386	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	86	88	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	297	298	
4	Aggregate Impact value = percent fines 100* (W_2/W_1) percent	22.45	22.80	**22.63**

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Concrete is 24%

Note:

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Job No.: CQCE/BBMP/CSR/W.No.16/2019-20

06.08.2019

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

CLIENT	Assistant Executive Engineer, Yeshwanthpura Sub Division, BBMP, Bangalore.
AGENCY	Sri. T. Chandra Sekar Reddy, Contractor, Bangalore.
NAME OF THE WORK	Pothole Filling Surroundings area of Ward No.16, BBMP, Bangalore.
DATE OF TESTING	06.08.2019

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	469	469.5
3. Weight of Asphalt and Mineral matter Extracted, g	31	30.5
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	31	30.5
7. Bitumen content in %	6.20	6.10
8. Average	6.15	

GRADATION AFTER EXTRACTION

TABLE - 1

SIEVE SIZE	Percent Passing, %		JOBMIX
mm	Sample 1	Sample 2	Gradation
19	100.00	100.00	100
13.2	95.23	97.16	79-100
9.5	86.54	84.98	70-88
4.75	67.21	65.21	53-71
2.36	50.36	52.74	42-58
1.18	42.68	40.74	34-48
0.6	32.65	34.65	26-38
0.3	21.45	25.23	18-28
0.15	16.89	18.65	12-20
0.075	6.23	5.26	4-10

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06.08.2019

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

CLIENT	**Assistant Executive Engineer,** Yeshwanthpura Sub Division, BBMP, Bangalore.
AGENCY	**Sri. T. Chandra Sekar Reddy,** Contractor, Bangalore.
NAME OF THE WORK	Pothole Filling Surroundings area of Ward No.16, BBMP, Bangalore.
DATE OF TESTING	06.08.2019

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	470	469.5
3. Weight of Asphalt and Mineral matter Extracted, g	30	30.5
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	30	30.5
7. Bitumen content in %	6.00	6.10
8. Average	6.05	

GRADATION AFTER EXTRACTION

TABLE - 1

SIEVE SIZE	Percent Passing, %		JOBMIX
mm	Sample 1	Sample 2	Gradation
19	100.00	100.00	100
13.2	93.12	95.23	79-100
9.5	84.19	82.65	70-88
4.75	65.21	67.51	53-71
2.36	48.25	50.12	42-58
1.18	40.16	38.54	34-48
0.6	31.65	33.57	26-38
0.3	22.34	24.56	18-28
0.15	15.23	17.98	12-20
0.075	4.56	6.45	4-10

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Job No.: CQCE/BBMP/CSR/W.No.16/2019-20

06.08.2019

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

CLIENT	**Assistant Executive Engineer,** Yeshwanthpura Sub Division, BBMP, Bangalore.
AGENCY	**Sri. T. Chandra Sekar Reddy,** Contractor, Bangalore.
NAME OF THE WORK	Pothole Filling Surroundings area of Ward No.16, BBMP, Bangalore.
DATE OF TESTING	06.08.2019

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	468.5	469
3. Weight of Asphalt and Mineral matter Extracted, g	31.5	31
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	31.5	31
7. Bitumen content in %	6.30	6.20
8. Average	6.25	

GRADATION AFTER EXTRACTION

TABLE - 1

SIEVE SIZE	Percent Passing, %		JOBMIX
mm	Sample 1	Sample 2	Gradation
19	100.00	100.00	100
13.2	94.15	95.23	79-100
9.5	85.23	84.15	70-88
4.75	68.21	66.45	53-71
2.36	49.65	51.84	42-58
1.18	37.45	39.26	34-48
0.6	30.61	32.87	26-38
0.3	22.65	24.37	18-28
0.15	14.21	15.98	12-20
0.075	5.95	6.10	4-10

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Job No.: CQCE/BBMP/CSR/W.No.16/2019-20 06.08.2019

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

CLIENT	**Assistant Executive Engineer,** Yeshwanthpura Sub Division, BBMP, Bangalore.
AGENCY	**Sri. T. Chandra Sekar Reddy,** Contractor, Bangalore.
NAME OF THE WORK	Pothole Filling Surroundings area of Ward No.16, BBMP, Bangalore.
DATE OF TESTING	06.08.2019

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	468.5	469
3. Weight of Asphalt and Mineral matter Extracted, g	31.5	31
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	31.5	31
7. Bitumen content in %	6.30	6.20
8. Average	6.25	

GRADATION AFTER EXTRACTION

TABLE - 1

SIEVE SIZE	Percent Passing, %		JOBMIX
mm	Sample 1	Sample 2	Gradation
19	100.00	100.00	100
13.2	92.31	94.65	79-100
9.5	82.13	80.62	70-88
4.75	61.84	63.21	53-71
2.36	52.34	54.68	42-58
1.18	44.65	45.87	34-48
0.6	31.65	33.54	26-38
0.3	22.65	24.81	18-28
0.15	17.21	19.10	12-20
0.075	7.25	6.45	4-10

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Job No.: CQCE/BBMP/CSR/W.No.16/2019-20 06.08.2019

Aggregate Gradation Test

IS : 2386 Part I

Client	**Assistant Executive Engineer,** Yeshwanthpura Sub Division, BBMP, Bangalore.
Agency	**Sri. T. Chandra Sekar Reddy,** Contractor, Bangalore.
Name of the Work	Pothole Filling Surroundings area of Ward No.16, BBMP, Bangalore.
Type of Mix	Bituminous Concrete
Date of Testing	06.08.2019

Total Weight of Sample: **5000** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	525	10.50	10.50	89.50	79 - 100	
9.5	610	12.20	22.70	77.30	70 - 88	
4.75	712	14.24	36.94	63.06	53 - 71	
2.36	684	13.68	50.62	49.38	42 - 58	
1.18	524	10.48	61.10	38.90	34 - 48	
0.600	416	8.32	69.42	30.58	26 - 38	
0.300	352	7.04	76.46	23.54	18 - 28	
0.150	302	6.04	82.50	17.50	12 - 20	
0.075	487	9.74	92.24	7.76	4 - 10	

Total Weight of Sample: **5000** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	543	10.86	10.86	89.14	79 - 100	
9.5	600	12.00	22.86	77.14	70 - 88	
4.75	721	14.42	37.28	62.72	53 - 71	
2.36	652	13.04	50.32	49.68	42 - 58	
1.18	512	10.24	60.56	39.44	34 - 48	
0.600	417	8.34	68.90	31.10	26 - 38	
0.300	364	7.28	76.18	23.82	18 - 28	
0.150	296	5.92	82.10	17.90	12 - 20	
0.075	502	10.04	92.14	7.86	4 - 10	

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